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June 23, 1995

VIA FEDERAL EXPRESS

Office of the Secretary  
Federal Communications Commission  
1919 M Street N.W.  
Washington, DC 20554

FEDERAL EXPRESS

JUN 26 1995

FCC MAIL ROOM

Re: Digital Transmission within the Video Portion  
of Television Broadcast Station Transmissions:

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MM Docket No. 95-42  
RM-7567

Dear Mr. Secretary:

Pursuant to the Notice of Proposed Rule Making adopted April 10, 1995, FCC 95-155, please find an original and four copies of the Comments of Zenith Electronics Corporation concerning the above-captioned matter.

We acknowledge that this will be received after the noticed deadline due to absences and conflicts which retarded completing necessary engineering and management reviews. We respectfully request that, in view of the nature and current status of this complex matter before the Commission, our Comments be accepted and included in the record.

Sincerely,



Stephen K. Weber

SKW/ds  
enclosures

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**Before the**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**Washington, DC 20554**

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JUN 26 1995

In the Matter of )  
 )  
Digital Data Transmission Within )  
the Video Portion of Television )  
Broadcast Station Transmissions )

MM Docket No. 95-42

RM-7567

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**NOTICE OF PROPOSED RULE MAKING:**  
**COMMENTS OF ZENITH ELECTRONICS CORPORATION**

Zenith Electronics Corporation, a manufacturer of color televisions, color television picture tubes and cable set top boxes, and a marketer of video cassette recorders, respectfully submits the following comments in the above matter. Zenith currently is or has been closely involved with a number of actions before the Commission, including closed captions, consumer-cable equipment compatibility and high definition TV. Zenith has recently reviewed this matter from the viewpoint of different engineering functions within the company, and has a number of concerns to raise. We are aware that the Electronics Industries Association Consumer Electronics Group (CEG) has been involved, and also that the Commission expresses concerns as to picture degradation from proposed data transmission techniques of the same general nature that our staff has raised. Moreover, we are not in any way opposed in concept to data transmission initiatives such as those before the Commission at this time.

We have not, however, had the opportunity to review carefully the previous submissions of the CEG, or the full docket, and Zenith also may bring a special perspective in light of its engineering and manufacturing activity for both consumer electronics and the cable and related industries. Therefore, at the risk of "reinventing the wheel," at least in part, we would like to present in summary fashion certain specific concerns which emerged from our considerations.

**1. Wave Phore System (Paragraph 7)**

We are concerned that both luminance and chrominance transients will be significantly degraded in television receivers. In addition, there is concern that the second audio program (SAP) of the received television audio will be significantly affected, and that the stereo signal being received will be degraded. Assessment of the potential interference into the television picture and sound by the data signal cannot be made at this point because of incomplete disclosure of the injection level of the digital data signal.

2. **Airtrax Line 22 System** (Paragraph 17)

We are concerned that television receivers containing captioning for the hearing impaired circuitry will be confused in the presence of Line 22 Data Signals.

Wall projection television receivers will show Line 22 data signals and therefore degraded pictures.

In some cable television systems, the set-top box passes the broadcast signal to the television receiver without alteration in the picture interval. However, Line 22 is right at the edge of this interval and may not be passed to the television receiver.

3. **Yes! Entertainment Corporation System** (Paragraph 21)

There is concern that some television receivers which establish black level at the picture display device with clamping circuitry will be adversely affected. A similar concern exists in regard to set-top boxes for cable transmission of broadcast signals which may not perform properly with this broadcast signal.

The television receiver may display a "halo" at the edge of the picture because of phosphor deposited beyond the edge of the picture tube.

There is concern that the horizontal scan synchronization of the television receiver will be adversely disturbed creating jagged vertical lines in the displayed picture.

4. **Digideck System** (Paragraph 22)

There is concern that the process of filtering out the television signal frequency image in the broadcast transmitter in order to insert the digital data signal will adversely affect the pre-echo transient portion of the displayed picture.

We appreciate the Commission's consideration of the foregoing concerns. If the Commission staff should need further elaboration on any of these, it should feel free to contact the undersigned.

Respectfully submitted,

Zenith Electronics Corporation

By:



Wayne C. Luplow

Vice President, Consumer Product Engineering  
and HDTV

Date: June 23, 1995